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CONTENTS

Two Types of Transcendentalism in America: WOODBRIDGE RILEY 281

Free Will: A. A. MERRILL 293

The Definition of Infinity: RAY H. DOTTERER 294

Reviews and Abstracts of Literature:

Barrow's The Validity of Religious Experience: WESLEY RAYMOND WELLS 301

Science and the Nation: H. T. COSTELLO 304

Journals and New Books 306

Notes and News 308

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THE JOURNAL OF PHILOSOPHY
PSYCHOLOGY AND SCIENTIFIC METHODS

TWO TYPES OF TRANSCENDENTALISM IN AMERICA[1]

I. Franco-American Type

THERE is a tradition that New England transcendentalism was "made in Germany." This tradition has been allowed to grow by a double default, both through the supineness of American scholars, and through the positive propaganda of German *Kultur*. It has remained for a Franco-American to dispose of the matter, by showing that the American transcendental movement, with its idealism and individualism, was but part of the greater movement of European romanticism. This was not pan-Germanic, but had its roots in the very characters of Emerson and Channing, of Ripley and Brownson; in the speculations of Coleridge and Carlyle; and especially in the eclecticism of Cousin, Jouffroy, and Constant. Common opinion, again, may assert that these groups—American, English, French—had their source and inspiration from beyond the Rhine, but that remains to be proved. M. Girard, to put it tersely, contends that there was an epidemic of emotionalism breaking out in the republic of letters, a kind of metaphysical measles—but not necessarily German measles. The endemic character of this movement is portrayed under a truly transcendental postulate, namely, a national soul belonging to each country.

The New England leaders had many points of agreement with the great German idealists, but if we add to the list Theodore Parker and Henry David Thoreau, Amos Bronson Alcott and Margaret Fuller, there is suggested a native strain, a peculiar virtue in the soil which fed the tree of transcendentalism. From this kind of speculative soil-analysis, then, one might learn what to expect in the way of a metaphysical crop. So Girard fitly begins his monograph with an introductory study of philosophic thought in America prior to the appearance of transcendentalism. The imigration into New

[1] William Girard, *Du transcendantalisme considéré essentiellement dans sa définition et ses origines françaises*, University of California Publications, Vol. 4, No. 3. Berkeley, 1916. Pp. 351–498. R. M. Wenley, *The Life and Works of George Sylvester Morris, A Chapter in the History of American Thought in the Nineteenth Century*. New York, The Macmillan Company, 1917. Pp. xv + 332.

England is called "*des hommes d'action et des hommes de Dieu.*" The Colonial college is described—and quite properly—as interested more in the evidences of design than the body-mind controversy; in the spiritual relations between man and God, than in the material explanations of man as a machine. But while the process of rationalizing was one-sided, that process led to a marked reaction against Puritan orthodoxy. The very preference for purposiveness was a sign of revolt against an inscrutable ruler, working in a mysterious way his wonders to perform. The deists, then, as rationalists, were veritable forerunners of the reasonable Emerson, yet it can hardly be held that the emotional element, which was so strong in the sage of Concord, was supplied before the day of triumphant deism with its cut and dried arguments. To intimate—as does the author—that the lacking element of sentiment was furnished as early as 1738 by the arrival of George Whitefield, the "revivalist," is going too far. The English evangelist influenced the subsoil of society rather than the upper strata. Read Charles Chauncy's *Seasonable Thoughts on the State of Religion in New England* and see how unseasonable that cool thinker considered the arguments and actions of the "hot" men.[2]

Girard misses the mark in intimating that there was anything "romantic" in the early eighteenth-century revivalism; he nevertheless offers a suggestive explanation for the later opposition to the French revolutionary romanticism. The wars of the great Emperor —diplomatic conflicts, the embargo against Napoleon—here is a new line of evidence for the Yankee dislike of a "Frenchified" philosophy. Another good point is made in showing how the Scottish philosophy of Dugald Stewart and Thomas Brown failed to satisfy the romantic impulses of the heart. So the generation which bridged the period between the eighteenth and nineteenth centuries, unable to return to the traditional Calvinistic dogma, disillumined as to the utopias promised by the French revolutionaries, apprehensive of the skeptical *cul-de-sac* of materialism—this generation was ready and eager for another and better philosophy. This was offered by the rising transcendentalism. By this is not meant the religious spiritualism of the Unitarians, which tended to grow more and more vague as time went on, but the real transcendentalism which, accurately speaking, had a new and fresh aspect supplied on the religious side by the writings of Madame de Staël, of Benjamin Constant, of Theodore Jouffroy, and on the philosophic by Coleridge, Cousin, and Carlyle, rather than by Kant, Fichte, and Schelling (p. 387).

[2] *Cf.* My chapter on "Early American Philosophers and Divines" in the *Cambridge History of American Literature,* Vol. 1, New York, 1917.

The author at this juncture brings forward his first critical contention, namely, that the failure to distinguish between the religious and philosophic phases of the New England movement has led the historians of transcendentalism to attribute to the Germans an exaggerated influence (p. 383, note 2). H. C. Goddard and the reviewer are here mentioned, but both of these, curiously enough, had meanwhile made his answer. Goddard's new account of Transcendentalism has just appeared in the *Cambridge History of American Literature.* My own account in the summary volume, *American Thought,* was evidently overlooked by the author.[3] In this were presented grounds for thinking that New England transcendentalism, as represented by Emerson, had other sources than Teutonic. Girard objects to making Emerson the soul and standard bearer of transcendentalism. If I have done that it is because Emerson's *Nature,* published in 1836, presented in the most compact form "the very soul of the machine." I confess, in that brief study, to having failed to appreciate the French contribution to the movement. This has been well supplied by the present author, who shows that the Gallic eclecticism was a prime incentive to the transcendental belief that, in the human soul, there exist certain intuitions, certain first causes of the entire religious and moral life, independent of all sensible experience and prior to all reason (p. 385). Channing and Ripley and Theodore Parker held these views, so did de Staël, Constant, and Cousin. The similarity between the two groups may be granted, but the crux of the problem is the priority of the *a priori.* When Channing is charged by Brownson with being "answerable for no small portion of the soul-worship which was for a time the fashionable doctrine of the metropolis," the question still remains, at what original fane was Channing first inspired with this worship? Was it German or French, or possibly that of the Scottish intuitional school? As to the first alternative, Girard offers new evidence. Such is the statement from *The Memorial History of Boston* that "long after French became a matter of course, the great German writers remained practically unknown on these shores."[4] This *History* has been too little consulted by the critics. It contains a mine of information as to the New England conscience and the rise of

[3] A similar misadventure has just befallen me regarding Girard. My article on "French Philosophy in America" was printed in the *Revue Philosophique,* November, 1917, only a short time before I discovered Girard's valuable contribution to the subject. And since writing this review there have appeared two more pertinent discussions: H. D. Gray, *Emerson, A Statement of New England Transcendentalism,* Stanford University, 1917; and Albert Schurz, *French Origins of American Transcendentalism, American Journal of Psychology,* Jan. 1918, Vol. XXIX., pp. 50–65.

[4] *Memorial History,* Vol. 3, p. 653.

transcendentalism, and its evidence is further confirmed by such contemporary reviewers as that of the *Christian Examiner* of 1831, who complains that in neglecting the literature of Germany, the Americans have followed the bad example of the English—"treasures of philosophy, history, poetry, and critic, speculative for the most part, having been sealed up from foreign eyes."[5] The proof from the periodicals is important and goes to push the date of borrowings from across the Rhine to a time after, not before, the Nov-Anglian cult of "the innate knowledge." Germany, it seems—and the evidence is cumulative—did not directly affect leaders like Channing and Emerson. With characteristic Yankee independence—when it came later to their reading the Teutonic originals—they claimed that Fichte and Schelling merely served to confirm what they already had in mind. Such conceit to the Germans may seem "*colossal,*" but Girard has cleverly suggested that these very leaders had other sources for their thought, sources of which they were, in a measure, unconscious. A generation before a German dictionary could be bought in Boston, the market was flooded with the works of the Scots and the colleges from Cambridge to South Carolina were filled with the text-books of Stewart and Brown, of Reid and Beattie. But this argument cuts two ways. To prove his central point—the preponderance of French over German influence—Girard is at pains to show how largely the scholars of Paris were indebted to their predecessors of Glasgow, Aberdeen, and Edinburg, Cousin being said to have adopted from Francis Hutcheson his conception of "the moral sense," and from Reid and Stewart his experimental method.

Intuition plus introspection—that which was once Gaelic soon became Gallic—such appears the argument of the author, an argument which seems to detract from his case rather than strengthen it. Now all this valuable material might have been used to a different issue, for it can be shown that the New England transcendentalism was "set" in its local mold before the advent of either French or German craftsmen. The French merely put the *ormolu* about the original vessel; the vessel itself was not made in France, nor in Germany, but was of British-American manufacture. In their historic order the materials were in part derived from Berkeley and his spiritual realism, from the Cambridge Platonists and their archetypes, and from the Lake School with its "spirit far more deeply interfused." Further proofs that the French finish came late is shown in Emerson's rather unfavorable opinion of Cousin—a mere eclectic method, he asserts, being too mechanical to catch such "a fly-away" as truth. Then, too, W. E. Channing, despite his admiration for Rousseau, expressed a certain hesitation as to the tendencies of

[5] Vol. 8, p. 75.

Gallic thought. Yet this by no means implies that, in fear of the French, the New Englanders went over to the Germans. Girard has collected some very illuminating quotations on this point. According to Margaret Fuller, "Kant was thought by evangelical divines to be more dangerous than any French novelist." According to Brownson no works of Goethe "are exempt from the charge of immoral tendency" (p. 404, note 26).

And the discounting of foreign influences may be carried further. While the attitude toward the Continentals was rather provincial, towards the British it was decidedly independent. As the author intimates, Coleridge loosened up the orthodox Calvinists, but had little influence on the transcendentalists, because they were already liberal. In fact they went much further than the transcendental talker of Highgate. At this turn an interesting point is made that Coleridge's obscurity of style could not obscure a certain attachment of his to the traditional Calvinistic doctrines. Indeed, as we take it, the contrast between the vague Coleridge and the precise Channing is typical. When the English rhapsodist concealed his real beliefs, the American rationalist exactly stated his points of disagreement with the old beliefs.

A like argument holds true in regard to German influences. In their attitude toward the early eighteenth-century system, Channing, Ripley, and Theodore Parker manifested the same critical spirit as did Kant toward the cold formalism of Wolff. Around their philosophies were drawn the black lines of dissent; these lines were bitten in like that of the etcher; they were not the indefinite pastel effects of the mere romanticist. This critical attitude is also exemplified in regard to Carlyle. Here Girard supplies the deficiencies of previous historians of transcendentalism by showing that the individualism of Emerson and Thoreau was not due to a blind hero-worship of the author of *Sartor Resartus*. Nor did the New Englanders get their idealism through the diffracting lenses of the Scotchman, and for three several reasons: Kant's system was declared "an absurdity" by Carlyle; Carlyle in turn was declared unintelligible by the Americans; while the latter, earlier in the century, had already received a diluted form of idealism through Cousin (pp. 410–411).

The problem of priority we shall take up subsequently, but the last contention as to the transcendentalist's kinship to the French rather than the German idealism is ingeniously upheld by another line of evidence. This is to the effect that, while the German metaphysics was counted too radical, the French furnished arguments to reconcile faith and reason, religion and science, the gospel and life (p. 470). The problem of the respective weights of foreign influences

is not a simple one. New England transcendentalism was evidently not made in Germany, nor France, nor Britain. As is so commonly thought, it was not a mere mechanical assembling of imported parts, but rather an organic growth, a native plant, fertilized indeed from abroad, but nevertheless rooted in the local soil. Yet even such considerations are not wholly correct. Our philosophic flora can not be divided into two classes, the imported and the indigenous. The problem is like one in comparative botany, where the plants of two divided continents possess resemblances due to the common ancestry of a remote age. So if Emerson appears akin to the Cambridge Platonists, it is because both hark back to the groves of the Academy; and if Channing be called the Fénelon of America, it is because the thinkers of Boston and of Cambrai were alike grounded in the ancient mysticism. Girard has performed a distinct service in pointing out these affinities. The influence, especially, of the French mystics, Fénelon, Pascal, and Madame Guyon, has been but slightly noticed outside of Quaker circles,[6] so at this point the part played by Madame de Staël is properly introduced. *De l'Allemagne* was almost a family text-book in America and its author an advance agent of the notion that there exists in man a special faculty, primitive, innate, by virtue of which, and without the aid of reason or sensible experience, one gains a knowledge of religious truth (p. 418).

The stage was set in America, yet the actors said their lines but haltingly, before French masters instructed them. Thus it is reported of Channing the elder that he made acquaintance with the master minds of Germany through the medium, first of Madame de Staël, and afterwards of Coleridge. The importance of the rôle of Gallic influence is further argued from the fact that de Staël obtained from Rousseau the notion of a special intuitive religious faculty, while, subsequently, Constant deduced from this the two kindred corollaries that the religious sentiment is universal, and that this sentiment goes through various progressive forms (p. 420). This tracing of the New England romanticism through various intermediances to its sources is of great significance. It may, however, be overdone, unless one keeps in mind that the reason the New Englanders were so sympathetic was because they themselves had been through the same experiences, and had undergone the same reactions. Like causes brought like effects. Rousseau was what he was because of Voltaire and the Encyclopædists, and Channing, because of the skepticism of Hume and the dry rationalism of Thomas Paine.

The comparative study of sources discounts the Teutonic influ-

[6] *Cf.* Rufus Jones, *Studies in Mystical Religion*, 1909.

ences on transcendentalism; so does comparative chronology. The problem of priority I have undertaken elsewhere in a comparison of Emerson's *Nature* of 1836 with his early *Journals,* in order to show that he was but slightly affected by German thought in his main tenets.[7] Girard does the same thing for Channing through an examination of the current magazines. Such is a statement from the *Christian Examiner* of 1827 that Schiller and Goethe "are still unfamiliar in America . . . more exciting are the books of Constant and Jouffroy." And what holds for the poets of Germany holds the more for the philosophers. As a matter of fact, New England knew almost nothing of Kant, Fichte, and Schelling until the 60's. In the 30's its knowledge came by a double refractive process through English translations of French treatises. Thus the translations of Cousin by Lindberg in 1832 and by Caleb Henry in 1834 led Orestes Brownson to assert that "Germany reaches us only through France." This statement was made in 1837. The following year came Ripley's important *Specimens of Foreign Standard Literature,* consisting of translations of Cousin, Jouffroy, and Constant. And yet in spite of all this, French eclecticism, though it contained fragments of the high German idealism, was not accepted as a whole by the independent Yankees. As Ripley remarked, that which the transcendentalists borrowed from Cousin were the arguments rather than the system, for "the reign of authoritative dogmatic systems has never been firmly established over the mind of this nation: every exclusive faith has called forth a host of dissent."[8]

II. German-American Type

By marshalling such evidence, Girard had done great service in disposing of the fable of the preponderant influence of German philosophy upon New England transcendentalism. The later preponderance is another matter; after the Civil War, William T. Harris, in his *Journal of Speculative Philosophy* furnished a direct importing agency for Teutonism. Kant, Fichte, Schelling, and Hegel were read in the original, and through the discussions of the St. Louis Metaphysical Club, the translations in the *Journal,* and the subsequent lectures of Harris and his colleagues, at the Concord Summer School, New England was largely won over to the recent marked sympathy with the German way of thinking. Another valuable line of evidence that the East was inclined toward Teutonism by influences from the West is furnished by the life of George Sylvester Morris of Michigan. It was the well-known translator of

[7] *Cf. American Thought,* Chapter VI., section 2, "The Sources of Transcendentalism."

[8] *Specimens,* Vol. 1, pp. 29, 30.

Ueberweg who gave to the country, for the first time, an adequate historical method in philosophy. This method, learned in the 60's through study at Heidelberg and Berlin, furnished the necessary cosmopolitan touch to a previous provincialism. Hitherto, philosophy in America had been like religion, denominational—its aim to uphold this or that point of view, to follow some "guide of life" which was termed true at the expense of other systems. Even the transcendentalists were guilty of this. As we have just seen, they were eclectics of eclecticism itself, Emerson himself being wont to pick and choose from Occident or Orient whatever might be a confirmation to his own beliefs. About the date, then, of our political centennial, the country was ripe for a better method. This was furnished to a great extent by Morris who showed that the historic course of philosophy was an evolution, or rather a portrayal of various schools of speculations with whose divergencies it would be as absurd to quarrel as with the various schools of painting. But now, and perhaps for the first time, an American student was enabled to gain a view of a vast historical canvas, crowded with figures and all with their places in the composition. Of course there were dominating personalities. As in the case of Raphael's School of Hellas, there was a central figure—the master of those who thought. But as Aristotle was flanked on either side by the Pre-Socratics and by the Stoics, himself standing midway in the long line from the early physicists to the later eclectics, so in the modern canvas, Hegel was presented as the commanding figure, and yet even so as vitally related both to his predecessors and to those who might come after him.

A guide into historic vistas—such we take Morris to have been. His chief contribution was not in bolstering up a certain "Christian spiritualism," because Herbert Spencer and the "agnostics" counterbalanced that, but rather in gaining the broad outlook, and then imparting it to others. This gain was made at great pains, for Morris's early outlook was as narrow as his later method was comprehensive. Born in Vermont, he was bred in so strict a sect that he was scarcely affected by the New England transcendentalism of his day and generation. Surprising as it may seem, he does not appear to have been even aware of this "latest form of infidelity," but to have had a blind spot for that which lay to one side of the straight and narrow path of Puritanism. Philosophically, then, his early life was thin and meager. There was about as much body and color in it as in the weathered farmhouse in which he was born. This quality, or lack of quality, lasted on. Morris's personal philosophy strikes one as a thin wash of optimism, a vague water color where the tints have run on the absorbent background of the abso-

lute. It was not his to grasp the "thick crust of reality" as did some of his pragmatic pupils. As Wenley confesses, his "philosophical interests converged upon the highest human ideals, more or less to the exclusion of the order of nature. The positivist attitude, with all its implications, remained alien, even distasteful—one had almost said disreputable—to the end" (p. 180).

Morris's life, in other words, constituted a sort of unfinished Hegelian synthesis. There was the thesis of Puritanism, the antithesis of Teutonism—but never a resolution of the conflicting forces. It is argued by his biographer that a short life prevented this, but it looks rather as if Morris was a transitional thinker, who went through various phases, but never reached full fruition. One of these transitional phases was that experienced at Union Theological Seminary. Leaving the New England home, with "the impress of spiritual qualities," passing through an academy whose principal possessed a "sanctified intelligence," Morris entered Dartmouth at a time when Butler's *Analogy* was still used, but Paley's *Evidences* had been supplanted by Haven's *Mental Philosophy*. As a result of all this his undergraduate essays showed an "utter innocence of historical evidence and method." Inspired by the "family ideals" and by intense abolitionist principles, Morris next entered the northern army before Gettysburg, but being detailed upon detached service, his "fundamental standpoint" received no shocks. The transition, curiously enough, came in the New York Theological Seminary and that not so much from the teaching in the place, as from private meditations. Union had been founded, among other things, to provide a seminary "for men of moderate views . . . to stand aloof from all extremes of doctrinal speculations." Its staff evidently kept to that aim. This is clear from the fact that in Morris's reading lists, which ranged from Aristotle and Ackermann to Mill and Spencer, there is no reference to the French eclectics, though Cousin and Constant were being taught almost around the corner at the old University of the City of New York. As to Morris's two theological teachers, one hindered, the other helped his development. Shedd taught a kind of Coleridgian mysticism, yet not without Calvinistic trimmings. But Henry B. Smith realized his pupil's intellectual perplexity and advised him to forego the ministry and proceed to Europe. The family feared "lest German philosophy should destroy his religious faith" and, because of his extreme reticence, it is hard to judge if it did.

Wenley here offers a very interesting picture of the Germany of 1866—two generations ahead of the English-speaking world in its treatment of philosophical and theological problems and even further removed from the United States than from England (pp.

107 ff.). Thus at a time when Protestant preachers, who filled American chairs of philosophy, were still winning bubble reputations in the "free will" controversy, Vatake had rendered that quarrel meaningless a quarter of a century before. While Morris's *Diary* throws little light on the influence of his foreign teachers, a later article shows that Trendelenburg left the deepest mark, and that in regard to method. Here Morris contrasts American philosophy as so often fragmentary and superficial, as compared with "the grave, comprehensive, universal doctrine" of the historian, rather than the propagandist. Historical investigation in the spirit of "scientific objectiveness" became, therefore, the prime aim of the American scholar on his return to his own country. This was shown by his translation of Ueberweg's *History of Philosophy, from Thales to the Present Time,* a translation which Professor Dewey has pronounced superior to the original because its ambiguities in style and statement were corrected, its bibliography increased, and numerous accounts of the contemporary German philosophers added (p. 121). Despite this masterly translation, Morris did not at once obtain a chair of philosophy, but was obliged to mark time as professor of modern languages and literature at the University of Michigan.

At this point we make bold to point out a "certain weakness in the middle" of Professor Wenley's book. The account of Morris's New England education is interesting and that of his foreign sojourn important, but in describing his own habitat the biographer becomes another "sweet singer of Michigan." We are interested in the life and work of Morris as forming "a chapter in American thought," but with the university that gave him so tardy a recognition we are not especially intrigued. However, by a kind of clever camouflage Wenley makes out quite a case for that seat of learning, once known as the "Catholepestemiad," much as the Grand Rapids furniture people will make one a set of antique furniture to order. It is all very well for local consumption to refer to Morris's colleagues as, variously, a "pioneer chemist," a "protagonist of seminar instruction," the "most eminent quartette of legal teachers in the country," but this remarkable galaxy of Michigan "Argonauts" could not prevent Morris from resigning his chair of modern languages and accepting a lectureship at Johns Hopkins University. Wenley calls this an "episode" and says that Morris was disappointed by the lukewarmness of the Baltimore administration toward philosophy. He, nevertheless, mentions among Morris's pupils John Dewey and Joseph Jastrow and describes what were then new methods of teaching philosophy—the seminar and the Metaphysical Club, whose membership included Christine Ladd, Josiah Royce, and G. Stanley Hall. For former students at Hopkins this chapter opens

a delightful, though somewhat dangerous, topic, namely, the reason for the administration's alleged "lukewarmness toward philosophy." It is intimated that President Gilman desired to secure a "safe man" in philosophy and that at the same time he was blind to the tendencies of "the scientific anti-philosophy" then prevalent in the place. Dr. Gilman, it is true, was a graduate of Yale in its Cambrian period, but, if I may be pardoned a personal reminiscence, I have heard from his own lips the story of the objection of the Baltimore clergyman to the proposed lectures by Huxley on the ground that "Huxley and God could not be in the same room together." As to this debatable topic, however, Wenley offers an ingenious explanation: "Johns Hopkins University and its president in their way, Morris in his, and many others were caught in one of those streams of tendency that are no respecters of persons. Science, at the flood of the Darwinian theory, was sweeping everything before it, and philosophy had become tolerable only as an introduction to scientific method. It was unlucky for Morris, at the moment that systematic philosophy—the only philosophy worth the name *wissenschaftlich*—had made but little impression in the United States, and that, as a result, his critical attitude towards the premature generalizations associated with science was taken for a reaction to Protestant dogmatics; he was supposed to be essentially inimical to scientific research, not merely in physical, but in humanistic affairs. Naturalists did not like his "transcendentalism," historians and economists deemed him a "romantic." Original research was taken to imply measurement and numbering of "objective" things; the extensive preliminary requirements for successful advance in philosophy were not provided or, at least, not emphasized and, as is altogether likely, had not been understood" (p. 149). Morris may have been a misunderstood genius, yet in strict accordance with his very historical method, his biographer should have no quarrel with those who were antipathetic to the idealism for which he stood. As Stanley Hall remarked, Morris, early in the 80's, "had developed a good way toward the Hegelian position, and so we did not agree" (p. 153).

It has been said that the Hegelian habit, once contracted, can never be cured. This seems true of Morris who "innocently accepts the transcendental order" and apparently remains in the pre-scientific stage. So he was not only sympathetic with the British Hegelians, and tended to view the antithesis between the noumenal and the phenomenal as if it were fixed, but also insisted upon an inevitable collision between natural science and spiritual aspiration (p. 243). It would be interesting to speculate what would have happened to Morris had he accepted the chair of philosophy at Cor-

nell where Andrew D. White portrayed the *Warfare of Science against Theology*. The outcome of the latter work was to elevate science at the expense of religion; whereas Morris disparaged science to bolster up religion. His attacks on the "metaphysics of materialism" appear, if not antiquated, at any rate overdrawn. But there was a certain excuse for this. The tremendous system of Spencer was one that would appeal to the public, as was shown by the financial success of the synthetic philosophy in America; but the easy agnosticism of this cloud-compelling Zeus must have been peculiarly irritating to one who was by nature vitally interested in the apologetics of spiritualism. It was then as obvious as a litmus paper test to expect a specific reaction in Morris's mind when he undertook the Ely lectures at Union Theological Seminary. This foundation, whose primary aim was to discuss "the nature and need of a Revelation," dated from 1865, a time when pietism and rationalism were at a draw. Yet eighteen years afterwards, despite the spread of Darwinian naturalism,[9] Morris could make bold to assert that "the human intelligence . . . has for its first or immediate object, the physical universe, as a language, the true reading of which brings it to the present knowledge of the divine Word, as the truth, or absolute causal reality of the universe."[10]

All this "defining the Absolute for a dollar," as Wenley suggests, shows two things—the essentially theosophical and mystical nature of Morris, and his ignorance of positive science and of its methods. It might also explain a third point—the recoil of some of Morris's pupils away from high idealism towards the humbler methods of pragmatism and neo-realism. Since Morris's day something has happened in American philosophy, something came to an end, namely, the metaphysics of supernaturalism.[11] Or, as James would put it, we have overpassed the standpoint of "cold storage truths." To us then, there hangs about Morris's metaphysics that stale air of sanctity often found in the parlor of a New England farmhouse, a room which represents in itself a "closed universe," without fresh air and sunlight—a room whose faded photographs, wax flowers, and hair-cloth sofa all have their analogies with the pietistic Hegelian's unreal entities, stiff formulæ, and slippery syllogisms.

WOODBRIDGE RILEY.

VASSAR COLLEGE.

[9] *Cf.* Morris's *British Thought and Thinkers*, Chapter XII., Chicago, 1880, where he calls Spencer a mere Pre-Socratic.

[10] P. 275. Also for a recent description of this Neo-Hegelian ideal, *Cf.* G. H. Sabine "Philosophical and Scientific Specialization," *Philosophical Review*, January, 1917, p. 19.

[11] *Cf.* W. T. Bush, *Constructive Intelligence*, this JOURNAL, Vol. 14, p. 505.

FREE WILL

THE problem of free will appears to be a problem only because, as Bergson well says, the conditions are not clearly stated. It appears to the writer that the difficulty of stating the conditions is due to a hazy idea of the meaning of cause and effect.

The concept of cause and effect is based upon the experience which the intellect defines as "a succession in time." However, before this experience leads to a belief in cause and effect it must be repeated. The oftener it is repeated the more firmly do we apply to it the idea of cause and effect. Especially does this idea become firmly attached to "a succession in time" if we can repeat the succession at will in a laboratory. Really all that science means by cause and effect is a succession in time which can be repeated.

In consciousness, however, while there is what the intellect defines as a succession in time, there is no such thing as repetition. The proof of this is simple. We can do the same thing twice, but the consciousness of the doing is never the same because the memory of the first time is present the second time. It follows that in consciousness there is no such thing as cause and effect in the scientific sense because nothing is repeated. Consciousness is a continual creation of the unique in real time.

The object of science is correct prediction and this can occur only when there is a repetition of events. You can not predict the result of a first event, you can only observe that result and use your observation as a basis for predicting the result if the event is repeated. But, as in consciousness there is no repetition there can be no prediction, and this is what is meant by free will.

From the intellectual point of view a moment of consciousness is caused in the sense that it is preceded in time by conditions which determine it, but as these conditions are never repeated no prediction can be based upon them because prediction is impossible without repetition.

Hence the opposite views of free will seem to be due to two different concepts of the meaning of cause and effect. If we say that cause and effect means simply what the intellect defines as a succession in time certainly consciousness is caused and there is no free will. If however, we say, as science does say, that cause and effect means a succession in time which can be repeated, then, as certainly, consciousness is not caused and there is free will.

Looking at the matter from the later point of view, it is of course evident that few of our *acts* are really free, most of them being determined by habit or external stimuli, both of which conditions can be repeated.

A. A. MERRILL

LOS ANGELES.

THE DEFINITION OF INFINITY

WE are again reminded by Professor Cobb[1] of the importance of coming to some conclusion with respect to the validity of the modern conception of the mathematical infinite. As my contribution to the discussion I offer some considerations in support of the contention that the "New Infinite" as defined by Dedekind and Cantor is a doubly ambiguous conception. This double ambiguity is disclosed by an examination (1) of the notion of "similarity" or "one-to-one correspondence," and (2) of that of "totality," as these notions are employed in the definition. Let us consider each of these points in turn.

1. *Infinity and one-to-one correspondence.*—The definition of an infinite aggregate or system given by Cantor and Dedekind depends upon the notion of "equal power," "equivalence," or "similarity." "Aggregates with finite cardinal numbers," says Cantor,[2] "are called 'finite aggregates'; and all others are called 'transfinite aggregates,' and their cardinal numbers 'transfinite cardinal numbers.'" The infinite or "transfinite" numbers and aggregates are thus defined negatively, as those which are *not finite;* and we must, accordingly, seek the distinguishing mark of the finite number. This is contained in the theorem that "If M is an aggregate such that it is of equal power with none of its parts, then the aggregate (M, e), which arises from M by the addition of a single new element e, has the same property of being of equal power with none of its parts." This theorem is used in establishing the fundamental properties of the "unlimited series of finite cardinal numbers," and thus becomes a virtual part of their definition. Finite aggregates, accordingly, are never equivalent to any of their parts, while infinite aggregates may be. "The first example of a transfinite aggregate," continues Cantor, "is given by the totality of finite cardinal numbers."

Dedekind's definition, although verbally different, is in substance the same. It runs as follows: "A system S is said to be *infinite* when it is similar to a proper part of itself; in the contrary case, S is said to be a finite system."[3] The point is, of course, not merely that two systems which are assumed or already known to be infinite are similar or one-to-one correspondent, *even if* one is only a part of the other. That such a similarity or equivalence of whole and part is to be found was the very puzzle that had perplexed the older mathematicians. The achievement of Dedekind (if it be a genuine achievement) is rather the reversal of the method of attack. The

[1] This JOURNAL, Vol. XIV., p. 688.

[2] *The Theory of Transfinite Number,* Jourdain's translation, p. 103.

[3] *Essays on the Theory of Numbers,* Beman's translation, p. 41.

"similarity" of a whole to its "proper part" is no longer merely an observed fact, nor is it for him an inference from their infinity; but infinity is now *defined to be* such similarity.

In Dedekind's terminology every system is a part of itself; while a system which contains some, but not all, of the elements of a given system is a *proper* part of the given system. Any two systems or aggregates are said to stand to each other in the relation of "one-to-one correspondence" when for each element or term of one there is one and only one term of the other. Mr. Russell's illustration is familiar: "The relation of father to son is called a one-many relation, because a man can have only one father, but may have many sons; conversely, the relation of son to father is called many-one. But the relation of husband to wife (in Christian countries) is called one-one, because a man can not have more than one wife, or a woman more than one husband."[4]

Now it is easy to show that these definitions contain a very grave ambiguity. For *whenever a series is found that is similar to, that is to say, in one-to-one correspondence with, a proper part of itself,* the series in question *may be shown to be in several other* kinds of correspondence *with the same part;* in fact, any sort of correspondence that one pleases to look for may be discovered; and, furthermore, any scheme or plan of correspondence may be shown to be just as rigidly *determined by law* as any other—specifically, as the scheme of one-to-one correspondence, which some partisans of the "new infinite" have too hastily assumed to be *the* relation in which the two series eternally stand.

Consider as a typical case the favorite, not to say hackneyed, example of a part which is similar to its whole, namely, the series of even numbers in relation to the series which contains all the numbers, odd as well as even. By definition, the series of even numbers is a proper part of the series of whole numbers, and yet by the law that each of its terms is a number twice the corresponding term of the series of whole numbers, it is required to stand in one-to-one correspondence with that series; and, therefore, by Dedekind's definition, the series of whole numbers is an infinite system. But we find that any other correspondence than the one-to-one may be seen, if we wish to see it. This may be exhibited thus:

I.	(W)	1,	2,	3,	4,	5,	6,	...
	(P)	2,	4,	6,	8,	10,	12,	...

II.	(W)	1,	2,	3,	4,	5, ...
	(P)	2,4,	6,8,	10,12,	14,16,	18,20, ...

[4] *Scientific Method in Philosophy,* p. 203.

III.	(W)	1,2,	3,4,	5,6,	7,8,	...
	(P)	2,	4,	6,	8,	...

IV.	(W)	1,2,	3,4,	5,6,	7,8,	...
	(P)	2,4,6,	8,10,12,	14,16,18,	20,22,24,	...

Case I. is the case which has been supposed to be *the* situation. In the other three cases we have respectively a one-to-two, a two-to-one, and a two-to-three correspondence. Now these other sorts of correspondence are determined by clear and definite rules of exactly the same kind as, although a little more complicated than, the rule which determines the one-to-one correspondence. In Case II. let the rule be that the second of the two terms paired with any one term of the whole series shall be four times that term; in Case III. the second of the two terms of (W) is the same number as the one term of (P) with which the two terms of (W) are bound up; in IV. every two terms of (W) are bound up with three of (P), and the rule determining the correspondence is that the last term of any given group of (P) shall be *three* times the last term of the corresponding group of (W). Now it is necessary to insist that the (P) of I., of II., of III., and of IV. is exactly the same series; for the "proper part" 2, 4, 6, 8, 10, *etc.*, is the part that is considered in each case. It has been shown, then, that the whole series stands to this proper part in these *various* relations of correspondence *in exactly the same sense* in which it stands to it in the relation of *one-to-one* correspondence.

The demonstration that this is true of any "proper part" of the series of whole numbers that one chooses to consider, as, for example, the series of multiples by 3, 4, *etc.*, or the series of the squares, of the cubes, *etc.*, of the terms of the natural series of numbers, must be left to the ingenuity and patience of the reader. He will find that the correspondence of a whole and a proper part of itself, which has been taken as the essential notion in the new definition of infinity, turns out, when more closely scrutinized, to be a nose of wax; it can be bent in any direction that one pleases.

What then do we mean when we say that two series are "similar" to each other? Do we mean (1) that the whole "system" and its "proper part" stand to each other in a relation of one-to-one correspondence *and in no other*, or (2) that they are in one-to-one correspondence and *also* related to each other in accordance with *other* schemes of correspondence?

This ambiguity in the meaning of "similarity" has given rise to some clever juggling with the conception of *equality*. Thus Professor Keyser assures us that it is a great error to suppose that the whole-part axiom is universally valid; that it ought rather to be considered as a "logical blade" which divides the finite from the in-

finite. He even discovers an analogy to the doctrine of the Trinity in the relation of the even numbers *E*, the odd numbers *O*, and the rational fractions *F*, to the manifold of all the rational numbers *M*; for "we have here *three* infinite manifolds *E*, *O*, *F*, no two of which have so much as a single element in common, and yet the three together constitute one manifold *M* exactly equal in wealth of elements to each of its infinite components."[5] The analogy manifestly depends upon a definition of equality: to be "equal in wealth of elements" is the same thing as to be "similar." So far as I know, Mr. Bertrand Russell has not shown any interest in Trinitarian apologetics. But like Professor Keyser he identifies "equality" with "similarity" or one-to-one correspondence. He tells us that without referring to the census we know that the number of English wives is exactly equal to the number of English husbands.[6] Professor Royce illustrates the same point by referring his readers to a company of marching soldiers, each of whom is seen to carry *one* gun. Even without counting, he says, we know that the number of soldiers is equal to the number of guns.[7]

The difficulty is that neither husbands, wives, soldiers, nor guns are infinitely numerous; and, while one-to-one correspondence may be accepted as a criterion of equality or even regarded as the meaning of equality in the case of *finite* collections, when we seek in the manner suggested by these examples to assure ourselves of the numerical equality of infinite series, the argument breaks down. If "equality" is no more than a relation of one-to-one correspondence, then of course by Dedekind's definition of an infinite system, such a system must be *equal* to a part of itself. The entire series of rational numbers is then "equal in wealth of elements" to the series of odd numbers or to the series of even numbers, and each of these to the other. But, in view of the fact, pointed out above, that when infinite series are found to be in one-to-one correspondence, they may also be shown to be in any other sort of correspondence that one chooses to look for, there is no more reason for regarding such series as numerically equal than there is for saying that one is twice or three or any number of times as rich in elements as another; if a one-to-one correspondence proves that two given series are equal, then a *two*-to-one correspondence ought to prove that one is *twice* the other, *etc.;* and if we were able at will to shift our point of view so as to see two soldiers carrying one gun or one soldier carrying two guns, or if the discovery of monogamy, polygamy, or polyandry in England depended merely upon the caprice of the observer, then we should

[5] *The New Infinite and the Old Theology*, pp. 85 ff.
[6] *Scientific Method in Philosophy*, p. 203.
[7] *Hibbert Journal*, I., pp. 37 ff.

certainly know nothing whatever about the relative abundance of guns and soldiers or of husbands and wives.

The source of the confusion is clear. If "similarity" is to be regarded as logically equivalent to "equality," then it must be interpreted in our first sense; that is to say, similar collections must be understood to be such as stand to one another in the relation of one-to-one correspondence *and no other*. In the nature of the case, however, no two infinite collections can be show to be similar in this sense. Accordingly, when the method of comparison which is now in question is carried over from finite to infinite collections, similarity must needs be understood in the second sense, as meaning one-to-one correspondence along with *other* relations of correspondence; but it is evident that in this sense similarity is not the same as equality.

It is, then, highly desirable that the champions of the "new infinite" should tell us clearly in what sense they understand the notion of "similarity." "A system S is *infinite* if it is similar to a proper part of itself." Does this mean that the whole and the proper part are in an *exclusively one-to-one* correspondence, or that the one-to-one correspondence is only one of the many relations of correspondence which subsist between the given collections? If the former is the correct interpretation of the definition, then, so far as I am aware, no genuine example of an infinite system has ever been adduced. At any rate, no example of an infinite system is revealed by an examination of the mutual relations of the various series of cardinal numbers. Accordingly, if this is the meaning of "similarity," the class of all classes each of which is similar to a proper part of itself is a *class without any members*. On the other hand, if the latter is understood to be the meaning of the definition, if the whole and its proper part are in a relation of one-to-one correspondence, and *also* in relations of one-to-two correspondence, two-to-three correspondence, *etc.*, then, to be sure, there *are* infinite systems. But then we are not justified in regarding the subsistence of a one-to-one correspondence between two infinite series as a proof of their equality; and, unless the fact that the part in question *is a part*—that is to say, is included within, but not coextensive with the system to which it belongs—be taken as evidence that it is *less* than its whole, it is meaningless to speak of any quantitative comparison whatsoever between the whole and a proper part of itself.

2. *The New Infinite and the Notion of Totality.*—In whichever sense the notion of "similarity" be taken, the "new" definition of infinity is logically implied by the old definition of the infinite as the *endless;* for any endless series is *inexhaustible,* and between two inexhaustible series it is always possible to exhibit a one-to-one correspondence, or any sort of correspondence that one chooses to look for,

inasmuch as, however far the pairing of terms or the correlation of groups may be carried, there can never be any dearth of partners or of groups of terms in either series. Accordingly the so-called new infinite may not unfairly be said to be no more than the old infinite in disguise. Consequently it can not be supposed to escape the logical difficulties which beset the older notion. In particular the new formulation does not remove the self-contradiction from the idea of a "realized infinite." This conception remains open to the fatal objection urged by Renouvier[8] that "the completed synthesis (*sommation effectuée*) of a series which by hypothesis is endless (*interminable*) is a contradiction in terms."

The new definition has, indeed, the appearance of avoiding the self-contradiction in the conception of the realized infinite. Thus Dedekind's "discovery" is hailed by Keyser as "one of the greatest achievements in the history of thought."[9] In the opinion of Russell, the new notion of infinity clears up all the puzzles in the conception of the continuum, and makes it unnecessary to seek for a finitist theory of the world.[10] And the new definition was eagerly grasped by Royce to save his Absolute Self from the criticism of Bradley. The New Infinite is supposed to deliver us from that *bête noir* of philosophical speculation, the "endless regress," and, by enabling us to take an infinite multiplicity all at once instead of term by term, to make possible the conception of a *totum simul*.[11] In short, the New Infinite would seem to possess an almost magical virtue.

Now I believe that this apparent victory over the self-contradiction residing in the notion of a realized infinite is a delusion. The self-contradiction has only been concealed—hidden away within the definition of infinity. The surprising dialectical potency of the "New Infinite" results from an ambiguous employment of the notion of totality. For when Dedekind speaks of the endless series of cardinal numbers as a *system* he tacitly imports the notion of totality, and consequently (if the term "totality" is understood in its usual sense) of finitude, into his definition of infinity; since we naturally think of a system as a whole—as a somewhat that is completely given. That the contradiction, instead of being overcome, has merely been concealed from view, appears even more clearly when we consider the phraseology of Cantor. As we have seen, the first example of his "transfinite" aggregate is the "totality of finite cardinal numbers." But he himself speaks of "the unlimited series of finite cardinal numbers"; and, if the series is *unlimited*, by what right is it called a totality?

[8] *Critique de la Doctrine de Kant*, p. 35.
[9] *Hibbert Journal*, Vol. II., p. 540.
[10] *Scientific Method in Philosophy*, pp. 130, 155.
[11] *The World and the Individual*, Vol. I., Supplementary Essay.

Such an employment of terms can only be justified by assuming a peculiar definition of the word "totality." Thus when Cantor speaks of a "totality," he may mean no more than that the collection or series denoted by the word is *determinate, i. e.,* is so defined that it is in principle possible to tell whether or not it includes any given term or collection of terms. For example, we can always tell whether or not a given number belongs to the series of even numbers or to the series of old numbers; and, inasmuch as these series are thus logically distinguishable, there is a sense in which each of them, though by the law of its formation an endless series, is nevertheless a definite and thinkable unity.

Now there are no doubt many such logically distinguishable types of endless series; and it is of course perfectly legitimate for the mathematician to study them, and even to call them "transfinite numbers," if he wishes to employ that terminology and is not himself led astray by it. The difficulty is, however, that some of the more enthusiastic champions of the New Infinite, those especially who have attempted to apply the conception to the solution of problems in theology and philosophy, have given it, at least by implication, a meaning which from the point of view of logic it can not have. They have, in short, forgotten the equivocality of the notion of "totality." For the infinite—whether new or old—can not be regarded as a somewhat that is actually existing, but only as a scheme or plan that is in process of realization; because, understood as an actually existing somewhat, it would be a totality, not merely in the sense of a series defined sufficiently for purposes of identification, but in the sense of a whole, no part of which would be lacking.

In accordance with Professor Cobb's rule of procedure we have been asking about the new definition of infinity, not only, "Is it true?" but also, "What does it mean?" Or rather we have been asking what it must be understood to mean if we are to accept it as logically possible. The same method of procedure must be applied to the definition suggested by Professor Cobb: "A group is said to be infinite when, if a is any finite number that has been chosen, the group has a subgroup of a elements." The "infinite group is chosen before the number a, and the subgroup is chosen after the number a." But what is meant by saying that the "group" is "chosen," "fixed," "given," *etc.?* This, it seems to me, is the crux of the whole question. The "group of finite integers," for example, is a definite unity or totality only in our narrower sense, namely, only in the sense that it is so defined as to be distinguishable from other groups. The "group" which is infinite by the proposed definition is then merely a series which is shown by the proposed test to be an *inexhaustible* and, therefore, *endless* series. And this, I take it, is the manner in

which the definition is interpreted by Professor Cobb himself; for he tells us in the more recent of the two articles referred to above that Kant's "indefinite" is the mathematical infinite.

Thus interpreted, the New Infinite is indeed logically unassailable —and also perfectly harmless. It does not help in the solution of any of the problems of philosophy or theology. It is a shorn Samson.

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REVIEWS AND ABSTRACTS OF LITERATURE

The Validity of the Religious Experience. GEORGE A. BARROW. Boston: Sherman, French & Company. 1917. Pp. 247.

Since the pioneer work of Starbuck and James in the psychology of religion, many similar studies have been made of the religious experience and of religious belief. An older and still a common method is the metaphysical approach to the philosophy of religion, in the effort, first of all, to establish the existence of God and the other objects of religious belief. Dr. Barrow has united the more recent scientific attitude with the older metaphysical method in a philosophical study, but in a study of the religious experience itself. By examining this experience, he seeks to show that the experience has within it positive theological implications. Whether or not his arguments for "the validity of the religious experience" seem cogent, the book deserves a careful reading by all those interested in religious problems.

The so-called religious experience is a fact. Some persons, at some times, unquestionably have the experiences that they call religious experiences. Dr. Barrow begins with the religious experience as a fact, and inquires into its source. "The validity of an experience involves . . . two things, an implication as to the cause, and the truth of the implication" (p. 17). "The claim of religion that it is a relation to a superhuman object or world" (p. 184) may be false, since the cause of the experience may be merely physiological. The religious experience may be only emotion, plus a (false) belief as to the source and significance of the emotion. This question of the truth or falsity of the belief regarding the source of the religious experience is a central one. Though Dr. Barrow says, "It is not belief that we are concerned with, but the religious experience" (p. 157), he elsewhere (p. 41) speaks of the "faith" in a superhuman being which the religious experience contains—and faith is a variety of belief. The "claim of religion" (p. 184) is also a form of belief, otherwise it would not be subject to the categories of truth and falsity.

In the midst of current efforts to define religion without bringing in belief in some form of superhuman reality (such efforts, *e. g.*, as Ernest Crawley's in *The Tree of Life,* Irving King's in *The Development of Religion,* and that of positivism), Dr. Barrow's insistence that there is always an objective, superhuman reference in the religious experience is timely and is justified by the facts of the history and the psychology of religion. Religion can not be defined apart from belief in superhuman or supernatural realities. Dr. Barrow shows by a sketch of various historical types of religion, from animism to Buddhism and mysticism, that "all agree in placing the source of the experience outside of that experience" (p. 152). Buddhism is sometimes regarded as an atheistic religion, but Dr. Barrow correctly points out that the Nirvana of Buddhism is the opposite of nothingness, and that "the Goal of [Buddhist] endeavor is something beyond the moral manifestations of humanity" (p. 157). Even the experience of the mystic points beyond itself. "The final state, which for the mystic is true religion, consists in the absorption of his narrow consciousness in something wider" (p. 106). "For the mystic . . . the source or object of religion is believed to lie beyond the limits of human personality" (p. 160).

Though the religious experience has reference to some external, superhuman source, it does not follow that the implication is of a logical sort and actually holds. There may be merely a *belief* in an external source, and the belief may be false. It is true that "the [religious] experience is not sufficient to give existence to itself by itself" (p. 130), but the causes may be purely physical and social. Recent studies of the Freudian type, which interpret the religious experience as sublimated sex impulses, and McDougall's discussion of the religious sentiments—admiration, awe, and reverence—in terms of simple emotions that are parts of the primary instincts, lend support to the view that the religious experience is a form of emotionalism associated with a belief that the cause of the emotional state is superhuman and divine. Further, the cause of this belief itself may be only tradition, early training in religious doctrines, and the like. That is, the religious believer may bring his interpretation, *i. e.*, his belief as to the external, divine cause, *to* the religious experience, instead of deriving the interpretation *from* the experience. This is a common fallacy in the philosophy of religion—the fallacy of falsely attributing an experience to a superhuman source when the cause is physiological merely. "Even a dream has a source outside of itself, and religion must so far be given the same character" (p. 108), says Dr. Barrow. Indeed, for all that he proves to the contrary, religion, unhappily, may have only this character—of a dream. The things

seen in a dream are not real. The cause of a dream is physiological; while, as Dr. Barrow himself suggests (p. 17), the task of a positive philosophy of religion is to establish the non-physiological as opposed to the physiological origin of the religious experience.

In his insistence that the religious experience implies a superhuman object, Dr. Barrow fails to distinguish implication, which is a logical matter, from the psychological state or act of *belief* that such implication obtains. There is nothing in the nature of the religious experience itself that logically implies a divine source, but it is true that a *belief* in a divine source is coextensive with the religious experience. It is possible that the belief may be true, but a metaphysical account of the universe such as Royce's or Eucken's would be necessary to establish the truth of the belief. In the absence of a conclusive metaphysical proof of the truth of religious belief, the weight of scientific evidence is on the side that claims a physiological origin for the religious experience, and that would brand the interpretations given by those having the experience as instances of the fallacy of false attribution. It is not that "the religious experiences imply a source exterior to themselves" (p. 104), *i. e.*, a non-physiological source, but simply that a belief in such implication obtains. Further, the source of the belief may not reside in the object of the belief (and of course *can not* if the object is not real), but in one's social environment. In fact, it is easier to explain the occurrence of belief than of its opposite, unbelief. Belief is the primitive attitude of credulous childhood to every assertion that is made.

Dr. Barrow, like many other writers in the philosophy of religion, would escape an otherwise inevitable confusion if he would explicitly distinguish between belief, as a psychological entity, and the object of belief. The belief in God is one thing; God, the object believed in, is another matter. Religious belief, *as* belief, is a purely psychological matter not unlike political or mathematical belief. The differentia of religious belief resides in the nature of the object believed in. Though people believe in God as the giver of their religious experiences, God may be an imaginary object, and the experiences may be explainable upon a naturalistic basis. If the distinction were kept clear between belief and the object of belief, the statement that "religions would not be religions, not exist as religions, without the outside source" (p. 118) would be changed to the statement that religions would not exist without the *belief* in this outside source.

Dr. Barrow tends at times towards what James called the fallacy of "vicious intellectualism." Thus he argues (pp. 178–180) for superhuman forces working in man, by limiting the human individual to narrow bounds by definition, and then calling superhuman any

manifestations that are beyond the human *as defined*. It is by no means true that natural man's "intellectual life is centered on the physical existence" (p. 178), at least not in all cases, and can not be made true by definition. Interests in ideals of goodness and beauty and truth, for example, are not signs of the superhuman in man, but are manifestations of the working of man's natural equipment of instincts and habits.

The pragmatic fallacy, so common in religious literature, is not entirely avoided in the book. This fallacy consists of the failure to distinguish truth from value, or of the assertion that beliefs which are valuable must, therefore, be true. Value has one definition, and belongs to the subject-matter of the value sciences; truth means another thing and belongs to the subject-matter of logic and epistemology. There is no *a priori* reason why they should always coincide. There is, on the other hand, empirical evidence to the contrary. Many primitive religious beliefs that are obviously false have possessed definite value in the course of human evolution, and in the higher religions there are beliefs, such as some of those fostered by the Catholic church, that have value for the believers though they are probably not true. Dr. Barrow commits the pragmatic fallacy when he says, "Validity thus becomes not merely a matter of logical accuracy, but of practical value" (p. 245).

Among the chief merits of a book in philosophy or in philosophy of religion are the introduction of an original view-point and the stimulation of thought and criticism, both *pro* and *con*. *The Validity of the Religious Experience* possesses these merits in a high degree.

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Science and the Nation: Essays by Cambridge graduates with an introduction by the RIGHT HON. LORD MOULTON. Edited by A. C. SEWARD. Cambridge: Cambridge University Press. 1917. Pp. xxii + 328.

This is a little book of popular essays concerning the work now in progress in a number of branches of science. The book apparently confesses by its rather defective binding and lack of index its own merely ephemeral character. But its purpose transcends any present emergency. That purpose is to bring to the English people a realization that the contributions which applied science makes to national defense and social well-being are not possible, save on the foundation of a highly disinterested following out of pure, theoretical science, along whatsoever pathways the latter may lead. The de-

tails of these essays are ephemeral in the sense in which the present work of science is ephemeral, striving towards the transcending of itself in the better science of to-morrow. But the main thesis of these essays will be as true to-morrow as it is to-day.

For the student of philosophy, the book contains a review of diverse fields of science in their present status, such as ought to be of considerable value. The essays which preach and draw the moral, even such an able one as that by W. H. Bragg on "Physical Research," are on the whole less effective than those which, like that by W. Rosenhain, "The Modern Science of Metals," say in effect, "Behold, this is what we have done, draw your own conclusions." Some of the essays are broad reviews of a whole science, as botany or geology or experimental medicine; indeed, that by E. W. Hobson on "Mathematics in Relation to Pure and Applied Science" attempts rather too much in the allotted space; others are on particular problems, as, for example, the interesting suggestions by W. H. R. Rivers on applied anthropology, "The Government of Subject Peoples." The only essay which reflects much of the animus of the present war is the opening one by W. J. Pope, entitled "The National Importance of Chemistry," but partly on that account it is by no means the least entertaining. Taken as a whole, these essays give as readable a review of a considerable range of contemporary science as is likely to be met with anywhere. A number of equally important lines of research, of course, get omitted altogether. But what we have here is well worth having.

The thesis of the essays is one which scarcely needs proving to the philosopher. He would admit at once the importance of the study of theory. Perhaps, rather, he would need to remind himself of a certain fortuitousness with which many of our great mechanical applications of science have supervened upon theory. Doubtless there are a hundred persons who can apply a new discovery of scientific principle to one who can make the discovery itself. But for all that, it still remains true that some of our most important inventions are exceedingly simple in themselves and require very little prior theory; the processes of manufacture in economically profitable quantities may require more application of theory than the original invention. It might, however, be even in these cases maintained that the happy accident is more apt to occur to, and bear fruit in, the mind that is well-grounded in scientific theory.

The thesis of this book might well lead us to another line of thought which is well worthy of our attention in these days of discussion about social reconstruction. The economic reward which comes to the pure scientist bears no such ratio to the good done the community as does that of the successful lawyer or business man.

The question is not solved by saying the pursuit of truth is its own reward; the question is not an individual one about the minimum reward the scientist can get along with, but a social one as to what the society can do for society's sake. The social justice here called for is the putting into practise the principle that society ought, for the good of all her members, to make use to the best advantage of the available brain-power of her members; and this result will not be achieved so long as dazzlingly greater rewards are held out before the ablest young men, attracting them to go into professions whose functions are, whatever the chance for originality in detail, in the broad outlines routine and regulative, than are held out before them as incentives to enter upon a career of creation and discovery that may leave its mark on the whole future history of the race. The solution of this problem is far from easy. He who discovers a new scientific law ought to receive a royalty on its applications, but no present patent system could possibly achieve this end; and he who gives us, like Copernicus, what is, as it were, a new heaven and a new earth, deserves a reward far beyond that accruing from any applications of science whatsoever.

The reviewer had another query come to him as he read this book, *Science and the Nation*. Suppose philosophers were asked to write a similar book, *Philosophy and the Nation*, telling what philosophy is doing just now. What could we philosophers say? We could say that though now, more than ever before, the world is crying out and pleading for a new, better, broader, more adequate philosophy, philosophers have had very little to offer; that most of us have been almost as narrow-minded as the common herd of people, and some of us more so, including among the latter some who feel a pride in their own impartiality; that our thoughts have been meager and critical when they needed to be massive and constructive. Like other salaried men who could not threaten to strike for higher wages, philosophy professors have recently come a little nearer the verge of starvation; but unlike other salaried men, they have not been altogether undeserving of their fate.

H. T. COSTELLO.
COLUMBIA UNIVERSITY.

JOURNALS AND NEW BOOKS

THE PHILOSOPHICAL REVIEW. September, 1917. *Philosophy in France*, 1916 (pp. 459–476): ANDRÉ LALANDE. – Examines the influence of the war on contemporary morality and its probable influence on the moral life of the future. Analyzes *Le problème de la mort et la conscience universelle* by Le Dantec. Notes the death of Delbos and Ribot. *Purpose as Tendency and Adaptation* (pp.

477–495): RALPH BARTON PERRY.–Examines temporal direction, tendency, and the relation of an external agent to a tendency as criteria of purpose. Proceeds then to examine purpose from the standpoint of adaptation or complementary adjustment. Of this there are three types, compensatory, progressive and preparatory. Each deals with automatism and is not a criterion of purpose. *Introspection and Intuition* (pp. 496–513): JOHN LAIRD.–Expresses the demand for a psychological analysis of Bergson's theory of intuition. Has psychology failed to analyze such a process, or can it be that there is no such process? Concludes that introspection, regarded as an act of direct acquaintance with the mind, is a perfectly possible process. *Two Types of Idealism* (pp. 514–536): J. E. CREIGHTON.–The two types of idealism are mentalism or existential idealism and speculative idealism. The former asserts that everything is mental in character and by its analytical method and its allegiance to the category of existence issues in realism; the latter is characterized by its direct acceptance of things as having value or significance, and by its contention that things form part of a permanent system of relations and values. *Discussion: Progress in Philosophical Inquiry:* ARTHUR O. LOVEJOY.–Replies to critics of the proposed *Summa Metaphysica. The Knowledge of Other Minds:* JAMES LINDSAY.–Selves as well as their purposes and intentions may be known. *Reviewers of Books:* W. B. Pillsbury, *The Fundamentals of Psychology,* GRACE A. DE LAGUNA. George A. Coe, *The Psychology of Religion,* MARY WHITON CALKINS. Frederick J. E. Woodbridge, *The Purpose of History,* GEORGE L. BURR. *Notices of New Books. Summaries of Articles. Notes.*

Muller, W. Max, and Scott, Sir James George. The Mythology of All Races: Egyptian and Indo-Chinese. Vol. XII. Boston: Marshall Jones Company. 1918. Pp. xiv + 450. $6.00.

Coover, John Edgar. Experiments in Psychical Research at Leland Stanford Junior University. Stanford University: Stanford University Press. 1917. Pp. xxiv + 641. $3.50, $4.00 or $5.00.

Guthrie, Kenneth Sylvan. Numenius of Apamea, the Father of Neo-Platonism: Works, Biography, Message, Sources and Influence. Grantwood, N. J.: Comparative Literature Press. 1917. Pp. iv + 215. $1.40.

Bridgman, Olga. An Experimental Study of Abnormal Children, with Special Reference to the Problems of Dependency and Delinquency. Berkeley, California: University of California Press. 1918. Pp. 59. $.65.

Wissler, Clark: Editor. Societies of the Plains Indians. Anthropological Papers of the American Museum of Natural History. Vol-

ume XI. Issued in thirteen parts: C. Wissler, R. H. Lowie, P. E. Goddard, A. Skinner, J. R. Murie, contributors. New York. 1916.

Alexander, Hartley Burr. Liberty and Democracy, and Other Essays in War-Time. Boston: Marshall Jones Company. 1918. Pp. viii + 228. $1.75.

NOTES AND NEWS

Mind announces the following series of Joint Meetings of the Mind Association, the Aristotelian Society and the British Psychological Society. They will be held at the Hall of the University of London Club, 21 Gower Street, London, W. C. 1.

Friday, July 5th (at 9 P.M.) "Space-Time," Professor S. Alexander.

Saturday, July 6th (at 10 A.M.) Symposium: "Are Physical, Biological and Psychological Categories Irreducible?" Dr. J. S. Haldane, Professor D'Arcy W. Thompson, Dr. P. Chalmers Mitchell, and Professor L. T. Hobhouse.

Saturday, July 6th (at 2.30 P.M.) Symposium: "Why is the 'Unconscious' unconscious?" Dr. Ernest Jones, Dr. W. H. R. Rivers and Dr. Maurice Nicoll.

Sunday, July 7th (at 2.30 P.M.) Symposium: "Do finite individuals possess a substantitive or an adjectival mode of being?" Dr. Bernard Bosanquet, Professor A. S. Pringle-Pattison, Professor G. F. Stout and Lord Haldane.

Monday, July 8th (at 2.30 P.M.) Short Communications of Special Problems.

MESSRS. R. G. ADAMS & CO., Columbus, Ohio, announce the publication of *The Field of Philosophy* by Professor Joseph Alexander Leighton.

DR. JOHN J. TIGERT, head of the department of psychology at the University of Kentucky, has been granted leave of absence and will go to France at the end of the academic year to enter Y. M. C. A. work.

The Journal of Philosophy
Psychology and Scientific Methods

There is no similar journal in the field of scientific philosophy. It is issued fortnightly and permits the quick publication of short contributions, prompt reviews, and timely discussions. The contents of the last five issues are as follows:

Volume XV. No. 6. March 14, 1918

An Apology for Tradition. W. T. Bush.
The Pragmatic Method. D. T. Howard.
Ceremonial Impatience. Elsie Clews Parsons.
Reviews and Abstracts of Literature. Journals and New Books. Notes and News.

Volume XV. No. 7. March 28, 1918

Why do Philosophical Problems Persist? B. H. Bode.
The Seventeenth Annual Meeting of the American Philosophical Association. Irwin Edman, Warner Fite, Helen Parkhurst.
Reviews and Abstracts of Literature. Journals and New Books. Notes and News.

Volume XV. No. 8. April 11, 1918

Dualism and Early Modern Philosophy. Albert G. A. Balz.
Reviews and Abstracts of Literature. Journals and New Books. Notes and News.

Volume XV. No. 9. April 25, 1918

Dualism and Early Modern Philosophy. II. Albert G. A. Balz.
Estimation of Centidiurnal Periods of Time: An Experimental Investigation of the Time Sense. Harry Cary.
Reviews and Abstracts of Literature. Journals and New Books. Notes and News.

Volume XV. No. 10. May 9, 1918

The Objects of Valuation. John Dewey.
Behavior. Henry Rutgers Marshall.
Doctrinal Functions. C. J. Keyser.
Error in Professor Holt's Realism. Evander Bradley McGilvary.
Reviews and Abstracts of Literature. Journals and New Books. Notes and News.

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American Journal of Psychology—Worcester, Mass.; Florence Chandler.
Subscription $5. 600 pages annually. Edited by G. Stanley Hall.
Quarterly. General and experimental psychology. Founded 1887.

Pedagogical Seminary—Worcester, Mass.: Florence Chandler.
Subscription $5. 575 pages annually. Edited by G. Stanley Hall.
Quarterly. Pedagogy and educational psychology. Founded 1891.

Psychological Review—Princeton, N. J.: Psychological Review Company.
Subscription (with Psychological Bulletin) $6. 480 pages annually.
Bi-monthly. General. Founded 1894. Edited by Howard C. Warren.

Psychological Bulletin—Princeton, N. J.: Psychological Review Company.
Subscription $3.25. 480 pages annually. Psychological literature.
Monthly. Founded 1904. Edited by Shepherd I. Franz.

Psychological Monographs—Princeton, N. J.: Psychological Review Company.
Subscription $4 per vol. 500 pp. Founded 1895. Ed. by James R. Angell.
Published without fixed dates, each issue one or more researches.

Psychological Index—Princeton, N. J.: Psychological Review Company.
Subscription $1.25. 200 pp. Founded 1895. Edited by Madison Bentley.
An annual bibliography of psychological literature.

Journal of Philosophy, Psychology, and Scientific Methods—New York.
Sub-Station 84. Bi-weekly. 728 pages per volume. Founded 1904.
Subscription $3. Edited by F. J. E. Woodbridge and Wendell T. Bush.

Archives of Psychology—Sub-station 84, N. Y.: Archives of Psychology.
Subscription $5. 600 pp. ann. Founded 1906. Ed. by R. S. Woodworth.
Published without fixed dates, each number a single experimental study.

Journal of Abnormal Psychology—Boston: Richard G. Badger.
Subscription $5. 480 pages annually. Edited by Morton Prince.
Bi-monthly. Founded 1906. Entire field of abnormal psychology.

Psychological Clinic—Philadelphia: Psychological Clinic Press.
Subscription $1.50. 280 pages annually. Edited by Lightner Witmer.
Monthly (9 numbers). Orthogenics, psychology, hygiene. Founded 1907.

Training School Bulletin—Vineland, N. J.: The Training School.
Subscription $1. 160 pp. ann. Ed. by E. R. Johnstone. Founded 1904.
Monthly (10 numbers). Psychology and training of defectives.

Journal of Religious Psychology—Worcester, Mass.: Louis N. Wilson.
Subscription $3. 480 pages per vol. Founded 1904. Ed. by G. Stanley Hall.
Published without fixed dates. 4 numbers constitute a volume.

Journal of Race Development—Worcester, Mass.: Louis N. Wilson.
Subscription $2. 460 pages annually. Founded 1910.
Quarterly. Edited by George H. Blakeslee and G. Stanley Hall.

Journal of Educational Psychology—Baltimore: Warwick & York.
Subscription $3. 600 pages annually. Founded 1910.
Monthly (10 numbers). Managing Editor, J. Carleton Bell.
(Educational Psychology Monographs. Edited by Guy M. Whipple.
Published separately at varying prices. Same publishers.)

Journal of Animal Behavior—Cambridge, Mass.: Emerson Hall.
Subscription $5. 450 pp. annually. Founded 1911.
Bi-monthly. Robert M. Yerkes, Managing Editor.

The Behavior Monographs—Cambridge, Mass.: Emerson Hall.
Subscription $5. 450 pages per volume. Edited by John B. Watson.
Published without fixed dates, each number a single research.

Psychoanalytic Review—Washington, D. C.: 3617 10th St., N. W.
Subscription $5. 500 pages annually. Psychoanalysis.
Quarterly. Founded 1913. Ed. by W. A. White and S. E. Jelliffe.

Journal of Experimental Psychology—Princeton, N. J.
Psychological Review Company. 480 pages annually. Experimental.
Subscription $3.25. Founded 1916. Bi-monthly. Ed. by John B. Watson.

Journal of Applied Psychology—Worcester, Mass.: Florence Chandler.
Subscription $4. 400 pages annually. Quarterly. Founded 1917.
Edited by G. Stanley Hall, John Wallace Baird and L. R. Geissler.

Journal of Experimental Psychology—Princeton, N. J.
Psychological Review Company. 480 pages annually. Experimental.
Founded 1915. Subscription $3. Bi-monthly. Edited by John B. Watson.